

TAMPERE CONSERVATORY OF MUSIC BUILDING EXTENSION

Tampere University of Technology
Master of Science Thesis

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Examiner: Professor Hannu Tikka



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ABSTRACT

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The master's thesis is based on a Finnish open competition called: Tampere Academy of Music Building Extension which is held in the winter 2013/2014. The purpose of the competition is to find a design for an extension to the music conservatory located in Pyykin Square in Tampere and to compensate constant shortage of premises. The extension will solve the problem by adding various new teaching spaces, a new concert hall and the "black-box" theater.

The building expansion will be designed to find a Pyykin environment-friendly, architecturally high-qualified solution, in which the aesthetic, practicality, technical-economic and sustainable development objectives could be solved in a balanced way. The new premises together with the existing conservatory will not only function as a high-level educational building, but also a living room for Pyykin people, and a joint between Pyykin nature and urban living.

The thesis consists of two parts, research part and design part. Research part includes background analysis, case study, context of Pyykin. Design part focus on the expansion of premises, which will be divided into four major parts: music teaching, dance teaching, childhood education and public spaces (concert hall and theater room). The design part of the thesis will be developed further and made more precise than a competition proposal. The thesis will contain A1 sheets, a text with appendix pages and a scale model.

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EXHIBITION PANELS



1. BACKGROUND ANALYSIS

1.1 The need for the extension

Tampere Conservatory Building Foundation organized the architectural competition of complex design of an extension, during December 2013-March 2014. The extension covers an area of 4500 square meters. After completed, the expansion will be part of the conservatory of music, providing vocational training and higher education including dancing, singing for pupils and students. In 2013, TAMK and Tampere Conservatory of Music has a total of 1,600 students, and 110 full-time employees. At the moment Tampere Conservatory of Music carries out education and training by renting premises and facilities all over the city of Tampere, because the conservatory has been generally in constant shortage of concert halls and premises. Some activities have to be host by renting concert halls from outside. The extension will be the solution of the problem through building a new concert hall and the "black box" theater.



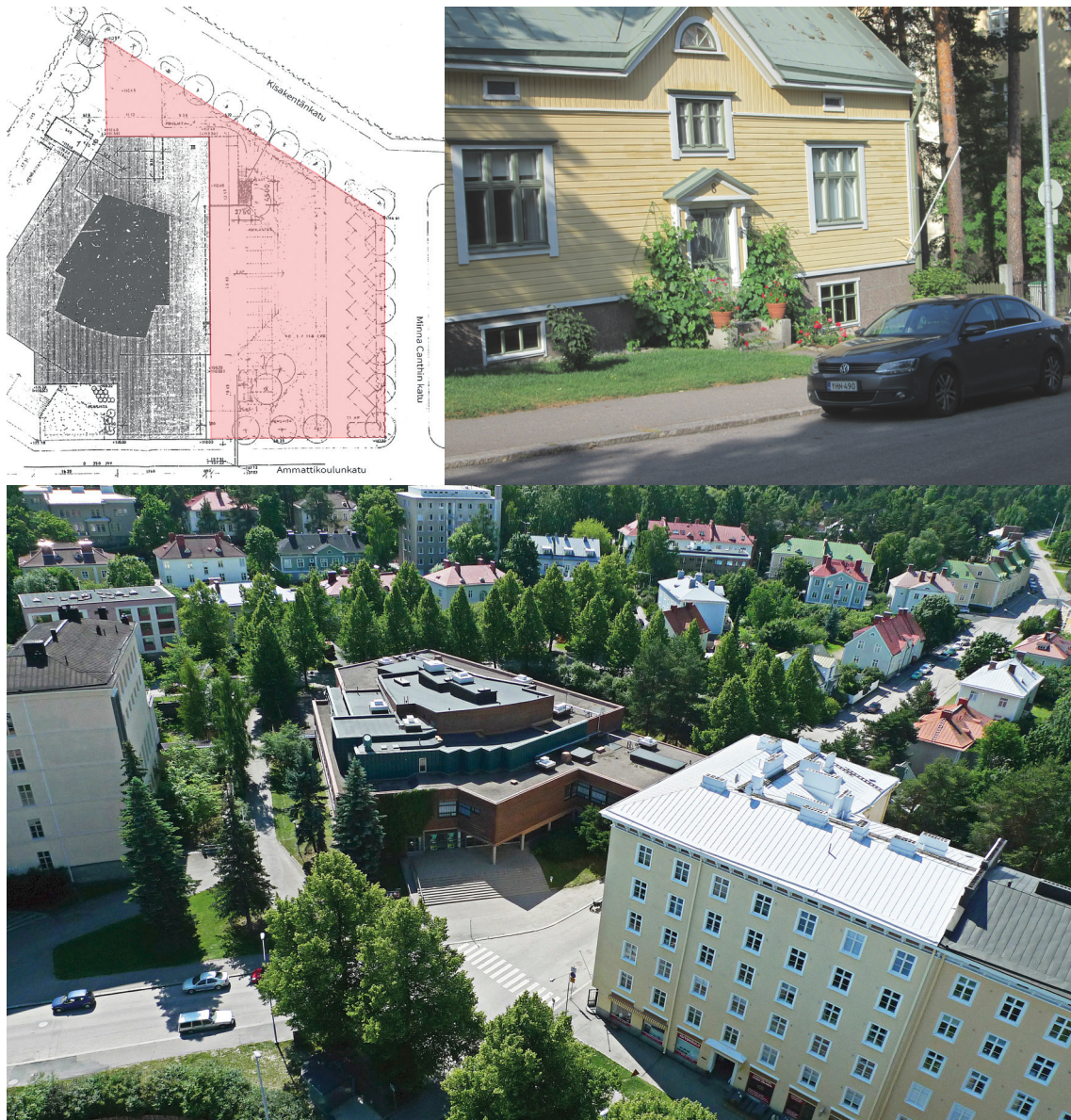
- a. The Tampere Conservatory of Music (1972-1995)
- b. The Tampere Conservatory of Music (1995-2014)

The first extension was implemented in 1995, when percussion classrooms, a small auditorium and voice control studio were added. The extension part was implanted on the rooftop of the old premises. The expansion part applied greenish painted metal panels as wall finish, to show the difference from the original part. But the extension still covered the iconic roof of the hall, thus the impression of conservatory as a landmark is weakened.

1.2 The location and surroundings

The competition area is located in the Pyynikki Square in Tampere City, The site is beside the Pyynikki Forest, on the north side of the ridge. Beside the site is a timber dwelling area built in the early 1900's. The current conservatory of music is surrounded by lush vegetation, and the preserved area for the new building is a parking lot now. The area is at the ridge foot where the ridge begins to rise, thus the current building is implemented within a typical slope solution, in which the base level is partially below the ground level of the building at the rear.

The cityscape is an extremely difficult task. The extension into the same plot with the current conservatory and close to the existing buildings need to be directed by a delicate design. Buildings in the surrounding area require special attention to cityscape solutions.



1.3 Review of the spaces



Problems and possibilities of the existing spaces

a. The old conservatory is lower than buildings beside it, and the dark color of the brick facade makes the building unnoticeable. The trees in front of the entrance interrupt the sight from the Pynikin Square.

b. The main entrance locates in the north part of the building. During most time of a year, the main facade and the entrance are hidden in the shadow.

c.d. The lobby is very low and dark, thus it needs 24hrs artificial illumination when in use. The Cafe needs bigger space. Audience, students, kids, and waiting parents use the same space in harmony, but bigger lobby is needed during peak time.

e.f. In some part of the building, The circulation and traffic are confusing and inconvenient.

g. Individual teaching rooms are somewhat narrow and dark, giving people a sense of repression.

h.i. The passageways are long and dark. Lack of attractive joints makes the corridors boring. There is possibility to connect these corridors to the new premises through replacing couples of classrooms by open spaces.

j.k. Besides the lobby, very few open spaces could be found in the building. The illumination and the atmosphere of those space are not ideal.

l. lush vegetation and nice environment surrounding offer good view for the classrooms.





2. INSPIRATION

2.1 Sibelius Hall

Customer: Lahden Sibeliustalo Oy
Architect: Hannu Tikka, Kimmo Lintula
Location: Ankkurikatu 7, Lahti
Project duration: 1996–2000
Scale: 90,000 m³

Sibelius Hall is located by the beautiful Lake Vesijärvi. Sibelius Hall is a congress and concert center that offers diverse services for both consumers and companies. Sibelius Hall was built in 2000 adjacent to an old factory building. The modern wooden architecture is combined with the old industrial history in the most interesting way.

The Sibelius Hall complex, an area of nearly 90,000 m³, is composed of four elements: the renovated Carpenter's Factory, the Main Hall building, Forest Hall (linking the previous elements together), and the Congress Wing (which is connected to the complex via a glass passage). Wood is the supporting material in all the new sections.

The very spacious Forest Hall and the stunning lake scenery create an incredible atmosphere for big lunches, festivities and events. A view to Lake vesijärvi opens from every room of the Congress Wing. The famous Main Hall acts as an arena for big conferences and as a concert venue. The concert program has options for every taste, also for additional entertainment of conferences and events. The versatile Carpenter's Hall and Workshop can be used for conferences, dinner parties and exhibitions. Restaurant services can be arranged to every room and venue of the house, according to the customers' wishes.



The impressive wooden concert and congress centre rose on the Vesijärvi waterfront in spring 2000. Its architects, Hannu Tikka and Kimmo Lintula, explained that the main source of inspiration in the design was the Finnish forests. The forest had always provided our ancestors with nourishment and raw materials, but it also involves mythical memories and scents – it has a relaxing essence. Another natural starting point in the design came from the industrial history of the site, the uncomplicated aesthetics of the old brick buildings, and the vicinity of water.

(Source: official website of Sibelius Hall)



2.2 Turku Arts Academy and Conservatory-Sigyn Hall

Customer: Kuntien Eläkevakuutus (KEVA)

Architect: LPR-arkkitehdit

Location: Linannakatu 54-60, Turku

Project duration: 1991–1994, 1995–1997

Scale: 16,000 m², 46,000m³

The Turku Arts Academy and Conservatory, completed in 1994 and 1997, are located on Linnankatu in the old Aura River shipyard area. The Conservatory is located in a shipbuilding hall (1928) and rope factory (1934, Gunnar Wahlroos), and the Arts Academy in a second hall (1928), social building (1970s) and a new section. The buildings are connected by a 270-metre corridor in a rope factory (1934). Between the shipbuilding halls the renovation created an outdoor forum, Varvintori, which opens onto the Aura River and the tall ship Sigyn.

In the conversion of the shipbuilding halls and rope factory in the old Aura River shipyard area into an arts academy and conservatory, new and old engage in interesting dialogue with each other and their environment. The Turku Arts Academy and Conservatory has also been recognized at an international level as an example of a successful process in which industrial areas on the edges of city centres, so-called brownfield areas, are transformed into environments for living and creative work.

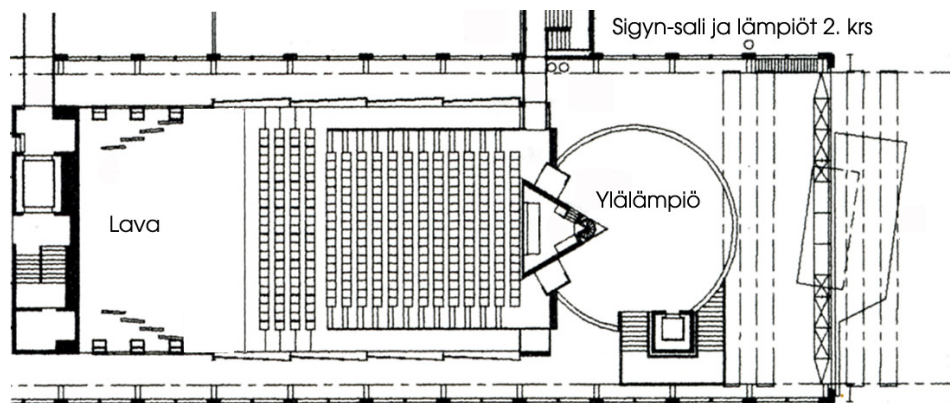
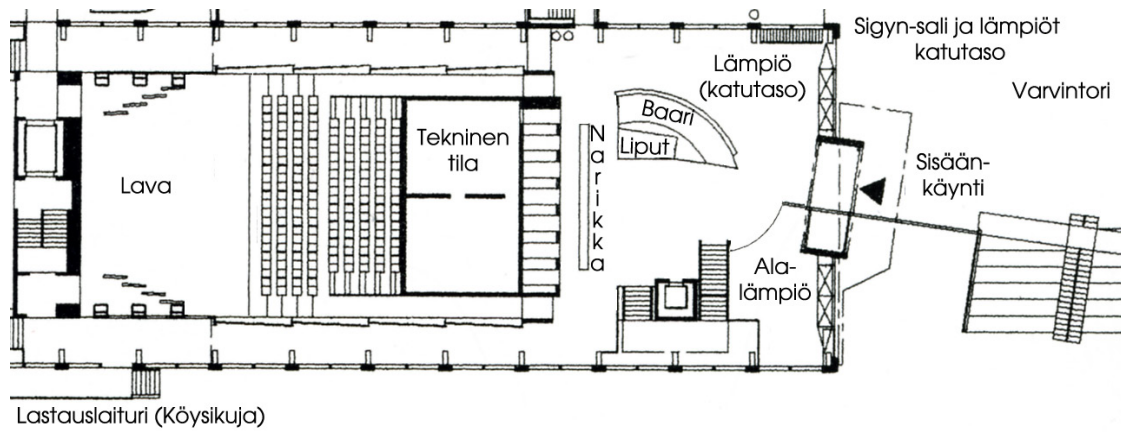
The Conservatory's public areas, Sigyn Chamber Music Hall (400 seats) and its lobby, the Crichton Hall (200 seats), Vulcan Hall (120 seats), restaurant and café, music library and study rooms were built on the "building within a building" principle in the shipbuilding halls. Teaching and administrative areas are on the second floor of the rope factory and in part in rope factory.

In planning historically-protected buildings, special characteristics of the old architecture must be considered. In addition, planning of the Conservatory was driven by the requirement for good acoustics. Sound insulation was taken into consideration in structures as well as ventilation systems. Old, high, roomy industrial halls offered a good foundation for music-instruction space and concert halls. They were divided into smaller sections while preserving the dominant position of the original spatial forms.

In designing the concert hall Architects thought about how to bring the atmosphere of the old shipbuilding hall into the concert space. It was decided to build the hall with glass walls. The wall architecture is formed by a meeting of acoustics and glass structure. Old, patinated, riveted steel structures were left visible. Gantry cranes were left as part of the lobby's interior to support the foyer level and roof structures at entrances.

The façades of the rope factory and shipbuilding halls were preserved with nearly their original appearance: depressed façade structures were not straightened, the patina of steel structures was not removed and new glass was lightly sandblasted. Conversely, in the glass wall of the lobby a point-fixed glass structure was used for the first time in Finland.

(Source: official website of LPR Architects' office)





3. CONTEXT OF PYYNIKKI

3.1 History of Pyynikki

Pyynikki has been part of the city since its foundation in 1779. The area had different purpose of use in different times. In the past it was a cattle pasture, a hunting area and a place from which residents could obtain firewood for their homes. The first restrictions for forest use came into power in 1803. There was a penalty for leaving the leftovers from cutting trees. It was entirely forbidden to cut the trees in the area in 1830. In the coast of Pyhäjärvi, there were villas of well-known families of Tampere.

In 1850's, the industrial activity had got its beginning in Pyynikki. In 1856 match factory was built between Jalkasaari and Joselinniemi areas. The factory was destroyed in the fire in 1865 but rebuilt again soon. In the beginning on 1900's, the factory was deconstructed but some leftovers of concrete foundation are still on view. In 1890, Nikolai Bauer found a tricot factory, which had later become Suomen Trikoo Oy.

The coast area of Pyynikki had become a national celebrations place since 1875. Summer fests were taking place in Pyynikki three times a summer. Pavilions and stages for agriculture fairs, as well as singing and music festivals were built to the area. Later on, those buildings were destroyed by the fire but the stage was built up again.

The protection of the landscape started as early as in the 1840's when the area was reserved for recreational purposes and tree felling in the ridge area was prohibited. This was the start of the present day handsome pine forest. Pyynikki's central areas were given the status of a nature conservation area by the Häme Provincial Government decision on June 5, 1993. Nowadays Pyynikki contains 32 hectares of green areas that are used as local recreation areas and parks.

(Source: official website of the city of Tampere)



3.2 Public facilities

There are several objects in the area, which are part of the built environment of Pyynikki. Facilities located in and around the protected area include observation tower with the cafeteria, summer theater, hotel Scandic Rosendahl, sports facilities(sports field, Varala International Training and Sports Center, covered exercise area, play and sports ground near Palomäentie), etc. The Pyynikki tower and the summer theater attract tourists coming to Tampere from everywhere, hence experience the impacts of mass tourism on the environment. There are much more public buildings scattered in the greater Pyynikki area. Picture below shows the location of these objects on the map.



Aerial View of Pyynikki Area

- Site
- 1. Tampere Conservatory of Music
- 2. Tampere High School Lyceum
- 3. Pyynikki Square
- 4. Tampere Art Museum
- 5. Amuri Museum of Workers' Housing
- 6. Pyynikki Swimming Hall
- 7. The Main Library
- 8. Natha Yoga and Tantra School
- 9. TAMK
- 10. Pyynikki Church Park
- 11. Alexander School
- 12. Lenin Museum
- 13. Tampere Workers Theatre
- 14. Pyynikki School
- 15. Swedish Secondary School of Tampere
- 16. Mini golf course
- 17. Pyynikki Observation Tower Café

- 18. Scandic Hotel Rosendahl
- 19. Atlas Park
- 20. Pyynikki Beach
- 21. Pyynikki Summer Theatre

3.3 Activities

There is a wide range of activities that can be accessed in Pynikki area, especially in summer. The number one all year round activity is walking. There are well defined and marked trails in the area, which can be used to enjoy the views, nature and to some extent fresh air during every season of the year. Residents also take their pets together with them to Pynikki.

Nature trail goes around the entire area and passes by several panorama places. The trail is 9 kilometers long. There are 20 checkpoints along the way to introduce the nature of Pynikki. The map and all the information about the trail is located nearby the observation tower.

The second activity available is exercising and doing sports. Pynikki is used by residents as an exercising area in all seasons. Some of the trails are lit and they function as skiing tracks in the winter. There are two pedestrian and bicycle paths on the ridge but cycling is prohibited elsewhere on the ridge. The ridge and its nature trail are also of great educational importance. Beside one of the trails there is a covered exercise area. There is also a beach with a lawn in Pynikki, so in summer it is possible to swim in the lake and take sunbaths. Next to the beach, there is a playground, ball game ground and a tennis court.

Observation tower and summer theater are worth to be mentioned in the list of activities. These two spots attract most visitors to Pynikki. Observing the spectacular view from the top of the tower, eating delicious doughnuts with a cup of coffee and watching the show in the theater are the possibilities to spend free time in Pynikki. While the theater is available only in summer period, the tower is open for the people all year round.

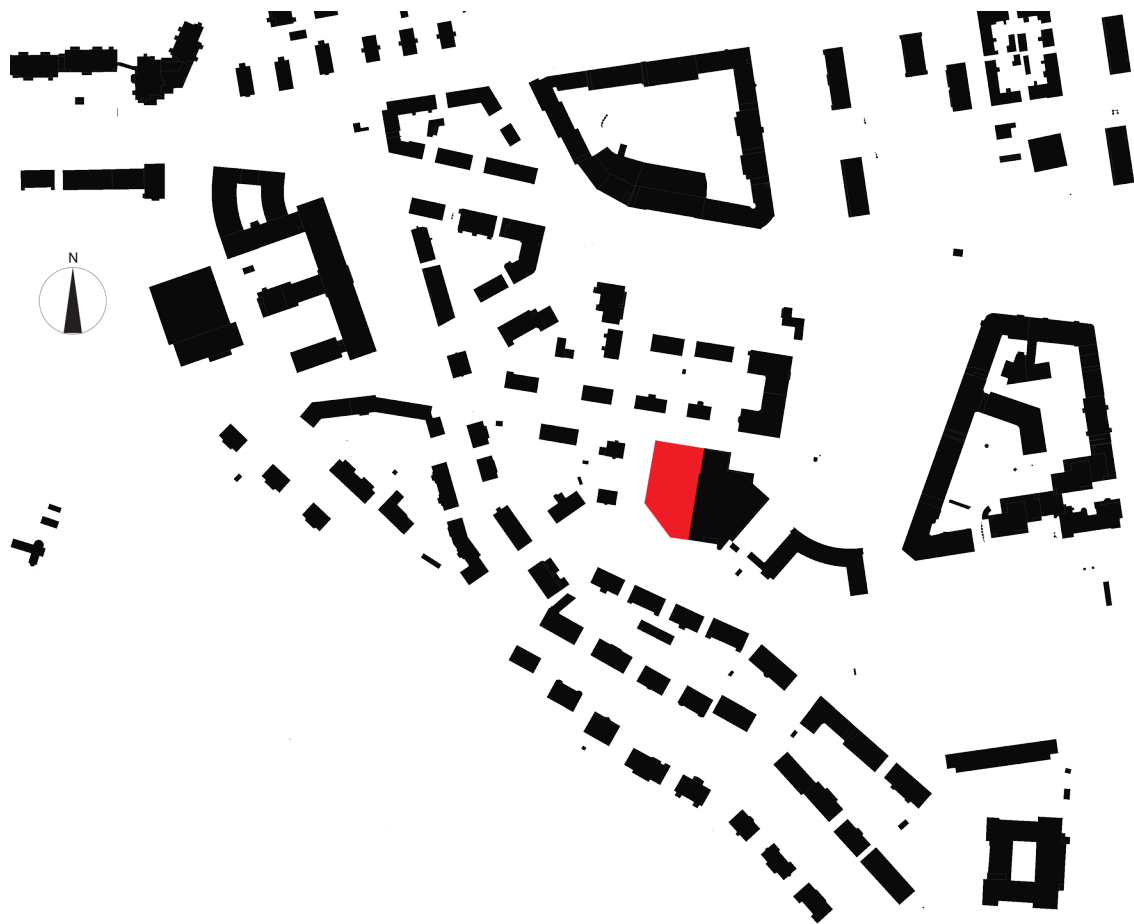
(Source: Semenova, Olga: Environmental Impacts of Tourism)





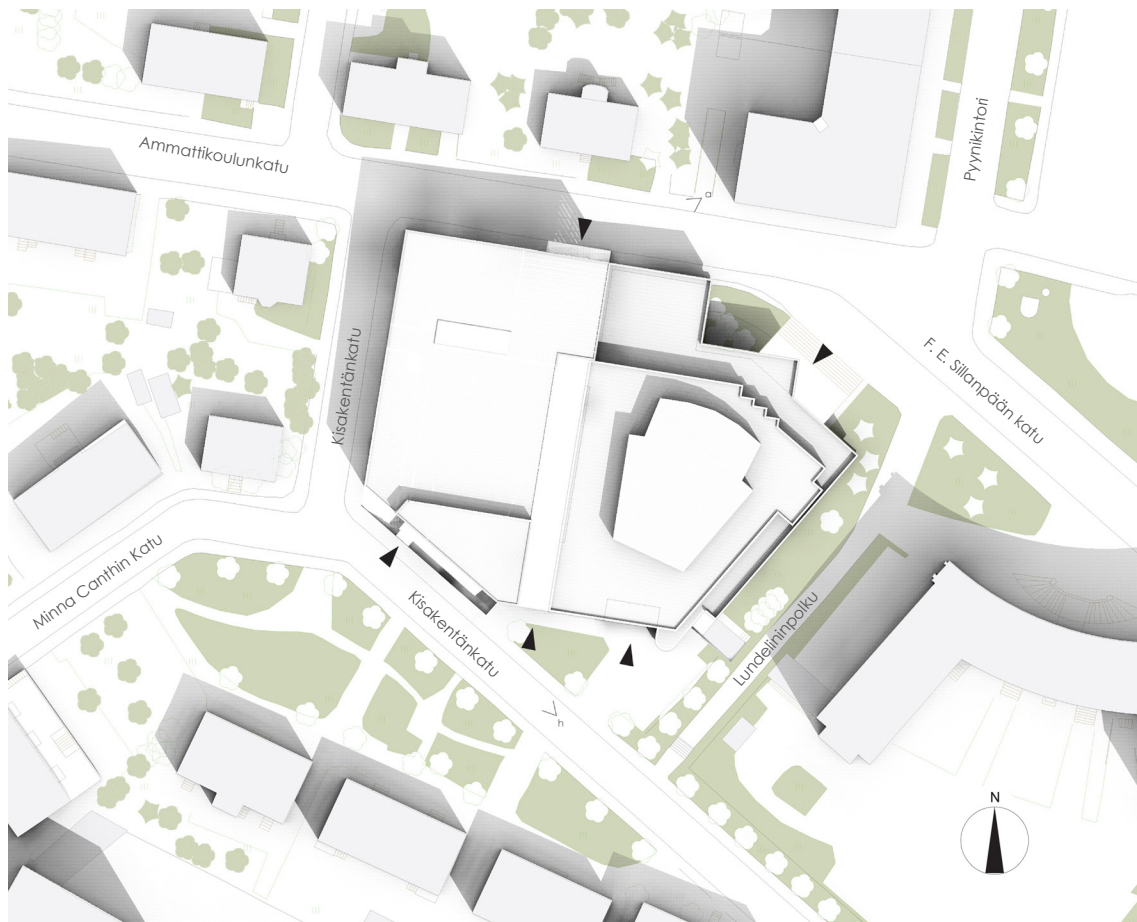


4. ARCHITECTURAL DESIGN



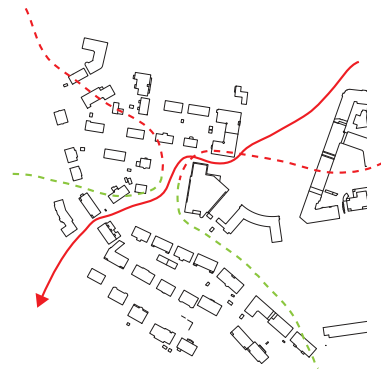
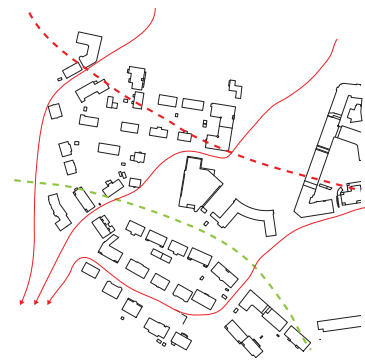
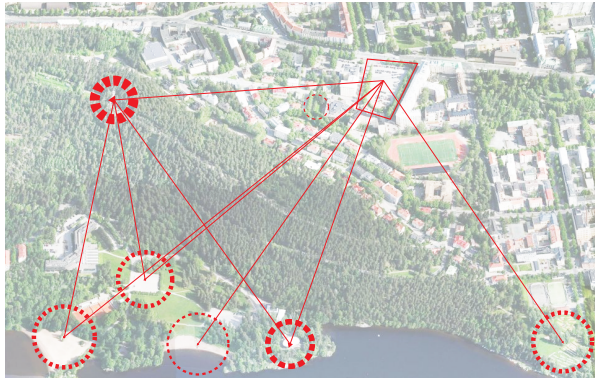
Site Plan 1/5000





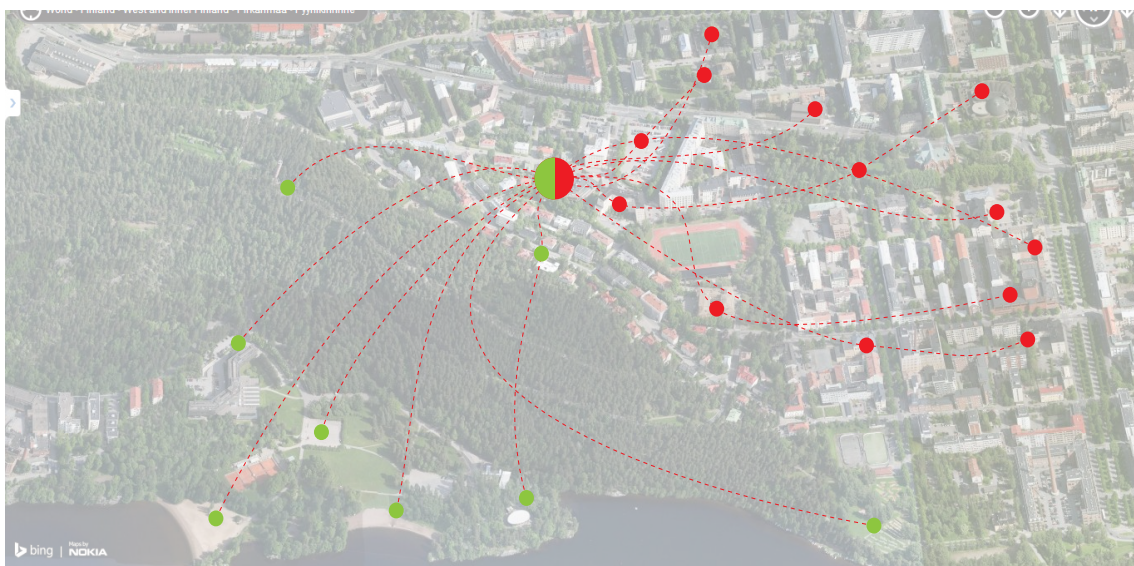
Site Plan 1/1500

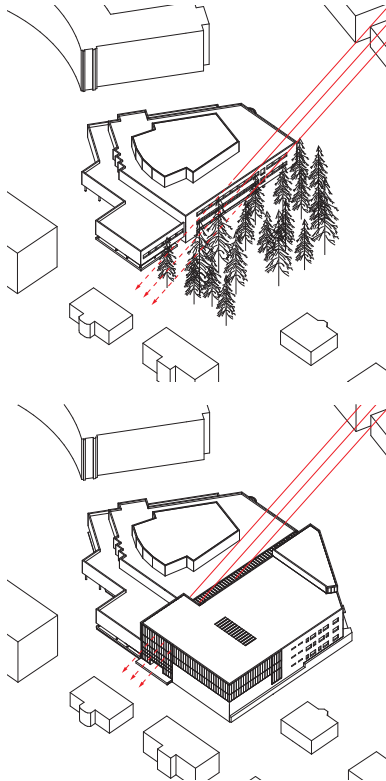




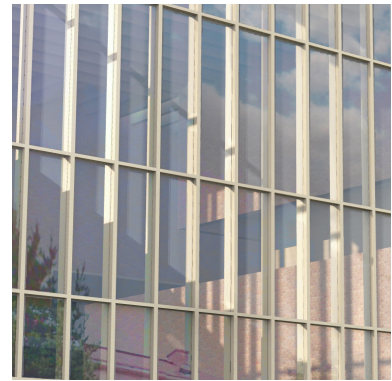
4.1 A corridor and a living room

In summer time, most people chose to visit those natural spots and spend long time near the lake coast, and the Pynikki tower and summer theater are the most popular places in Pynikki. But in winter, all the outdoor facilities near the lake are closed, thus the Pynikki tower is the only attractive spot in the area. Because of that, The new conservatory would function as a conjunction between urban and nature, especially during winter. The building locates near the Pynikki Square, where many visitors come from by bus. When the building constructed, it will be an important visiting spot of Pynikki Area. People could have a break before their traveling to the forest, or they could spend time in the new premises. The building would not only a corridor connecting urban and nature, also a living room for Pynikki people and visitors.

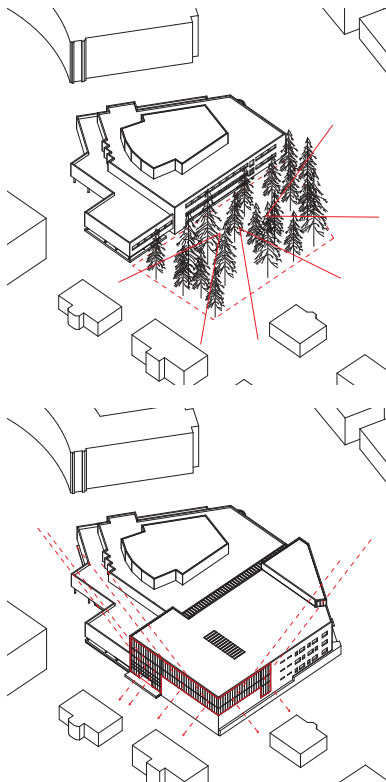




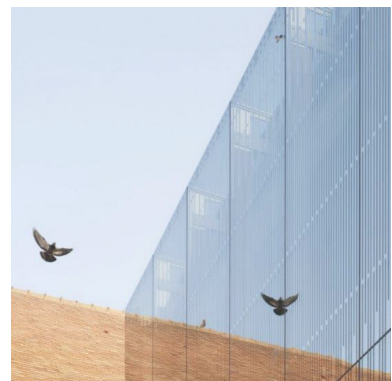
A forest: a natural view to the old wing of classrooms



Wooden curtain wall and glass ceiling: Better natural illumination to the old classrooms and the new foyer



Lush vegetation: impression of nature



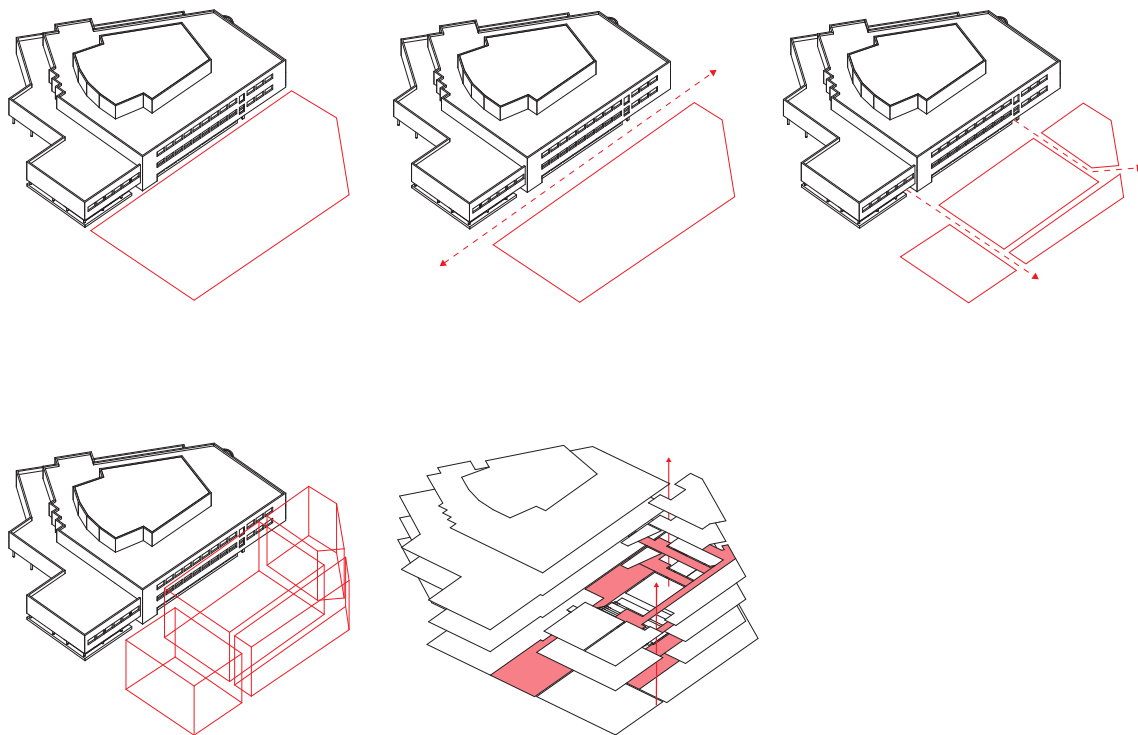
Large area reflective surface in north: a mirror of nature and Pynikki context

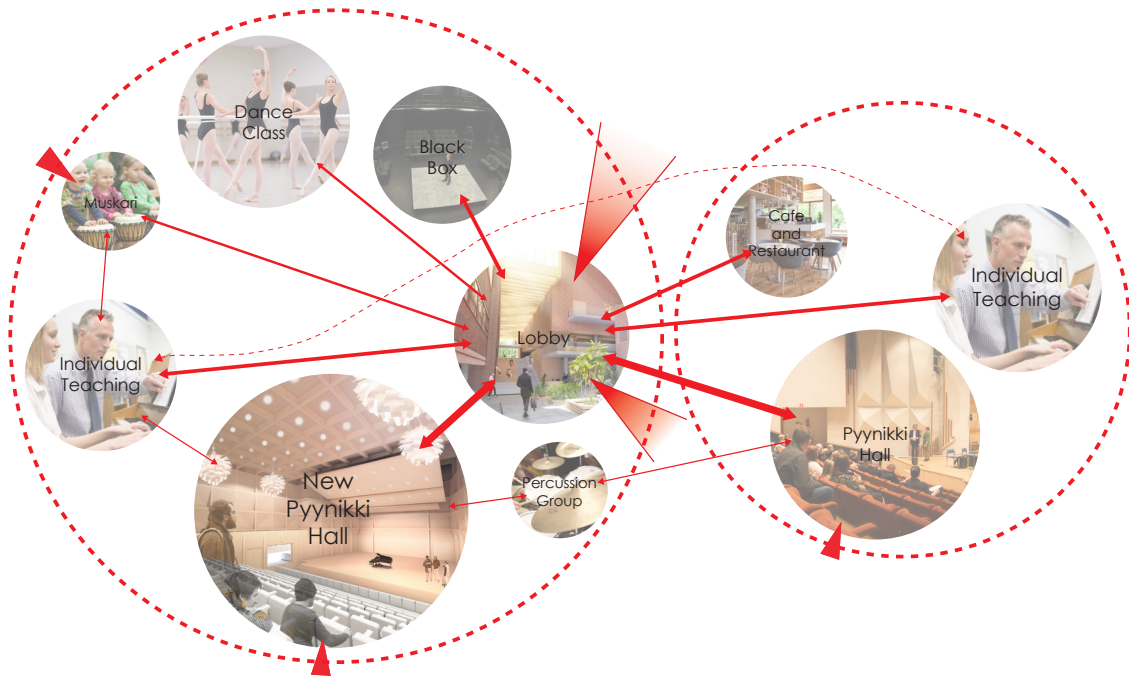
4.2 Diagrams

1. The plot is next to the present conservatory, which west facade faces a view of lush vegetation. The new extension part will leave a buffer space between two concert hall, and the void will be covered by transparent walls and ceilings, thus the wing of classrooms in old building could still have adequate natural illumination. Meanwhile, the new main entrance in north facade could be more affinity and attractive. The wood curtain wall imitate the impression forest gives to people. Sunshine from south could go through the ceiling and curtain wall, transiting warm and energy to visitors.

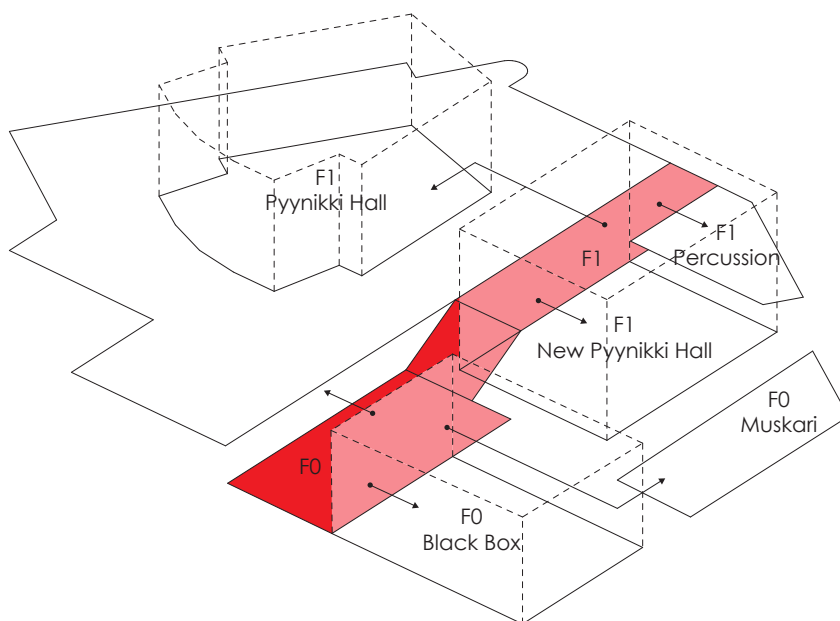
2. The facade of the extension part will be relatively simple and flat. Large area of glass and reflective glass will be used on the facade. because of the reflection of pyynikki nature on the building surface, the new conservatory could be seen as half-invisible. The expansion part would be a mirror of the sky, trees and context of pyynikki.

3. The large and long foyer between new and old functions as a buffer zone, offering illumination, resting space, main traffic path and venue for activities. The other functional entity could be divided into four groups, cut by circulation route.





4. The new lobby between old and new concert hall is the most important public space, which connects the cafe, black box theater, Muskari and the old lobby facilities on the level of north entrance. On the level of south entrance, the lobby offer a buffer space for the crowd to the Pyynikki Hall. The old hall is on the same level with new hall and percussion classroom, thus the heavy instruments and stage property could be transported without any difficulty. Besides the lobby, there is also one shortcut path on every floor connecting educational premises in old and extension part, especially used by students and staffs.





4.3 Functional entity

The building would be placed in the vacant plot next to the existing conservatory, which would be attached to the new building. The building design takes into account the suitability of the premises of music and dance classes, as well as the resulting acoustics, isolation and reverberation requirements.

The building takes into account, above all, the operation requirements, but also allow reasonable flexibility of any changes over time. the adaptability of the conservatory will be taken into account and taken advantage of. The new and old conservatory will function as a whole.

Contents of music and dance education and performance activities revolve smoothly with each other, however, all its operations are able to concentrate on one action. The building lobby facilities provide a meaningful whole so that the current main entrance to the conservatory remains in its way and on the other hand, to fit the new building smoothly.



4.4 The expansion planning

Expansion of premises could be divided into four major parts: music teaching, dance teaching, early childhood education and public spaces (concert hall and black box).

The teaching of music

Music teaching spaces include both individual teaching and group teaching premises, and all facilities take into account music acoustic requirements. Meanwhile new premises also fulfill traditional classroom teaching requirements, such as the use of a normal speaking voice in teaching situation. The room height would be adequate as 3 meters or higher. Percussion teaching classrooms have to consider efficient connections to public spaces, from the point of view of musical instruments transportation. The total area of individual education section should be at least 300 m², and the total area of group teaching spaces should be no less than 330 m². In addition, the other various teaching space of a total area about 300m² should be attached on the program too.

The teaching of dance

Dance teaching asks for strict requirements of airiness and materials, for example, floors. Premises height should be at least four meters, in order to ensure the necessary air in all situations and exercises. Storage of dance performance costume should also be reasonably achievable. Ballrooms with a total surface area of 480 m² should be broken down into three different rooms.



The early childhood facilities

Spaces of early childhood education should be considered as to fulfill dance and music needs. Early childhood education is always a group of education and training participated by children between the ages of 0-6 years with Parents often. Early childhood volumes are relatively large, so these premises should be connected to the public facilities(lobby), offering a buffer zone for interval crowd. There would be also an individual entrance direct to outside.

The public spaces

The public spaces refers to a variety of halls, lobby and corridor spaces.

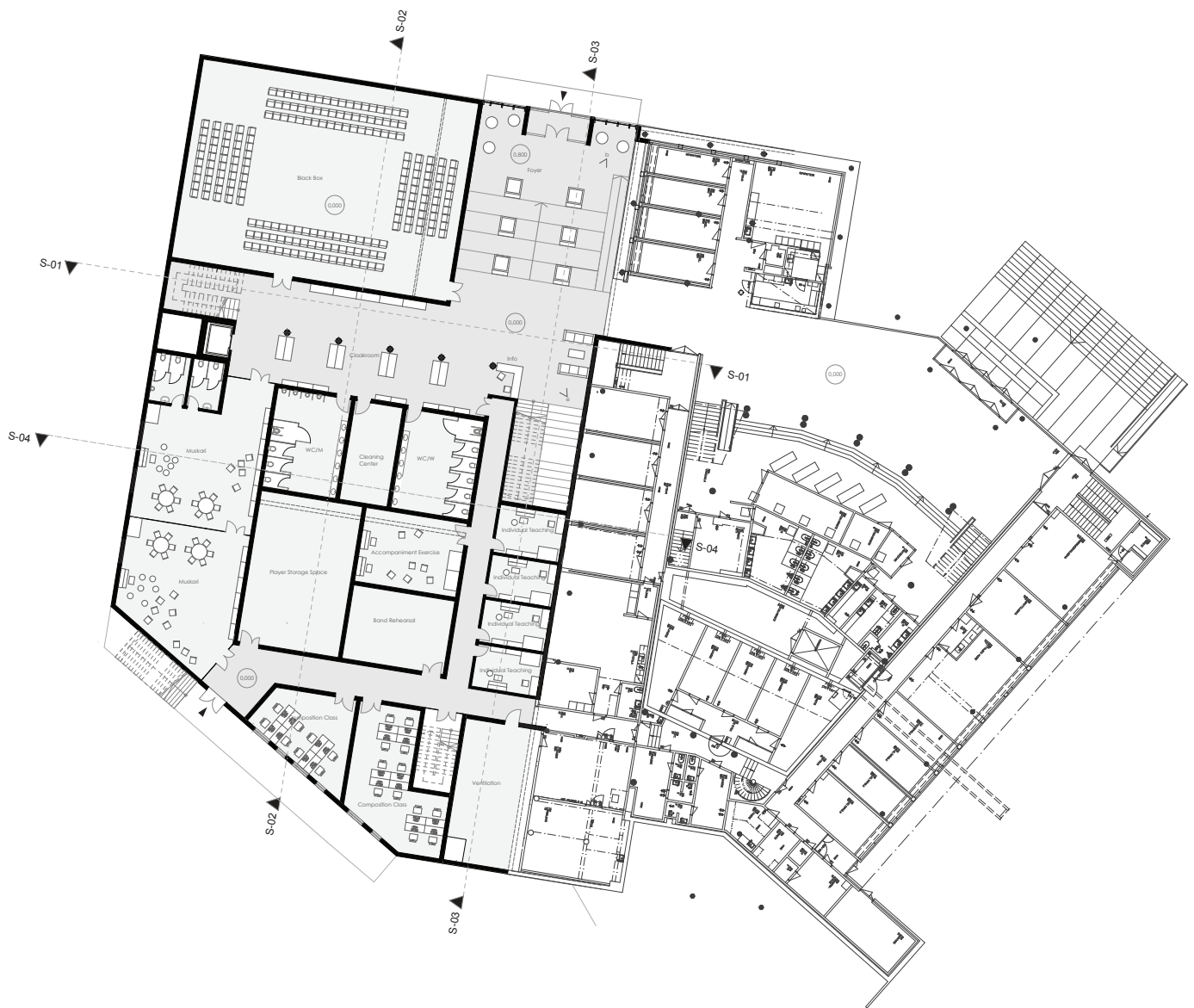
New concert hall

- The status of the hall is the "heart", around which emerge all other facilities.
- Provides acoustic effect for symphony orchestra ensembles particularly
- Grandstand with seating for about 300 people
- Smooth and controlled access to percussion classes and the current Pyyrikki Hall with shared storage and technical rooms

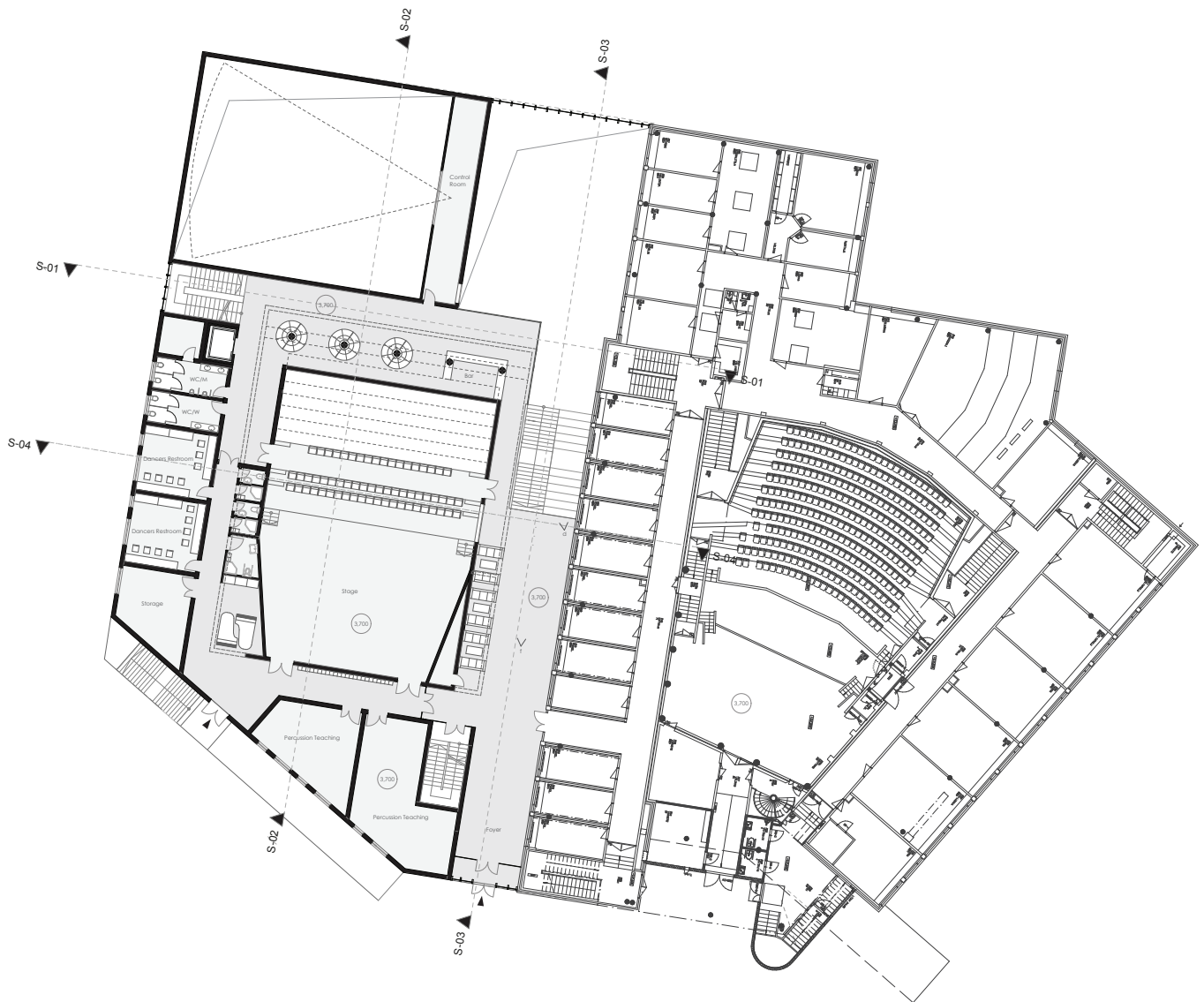
Dance and music theater hall "black box"

- Transformable hall space, which is built on the electronic acoustics for sound reproduction
- Provides a good chance of dance and music collaboration in training and presentation activities

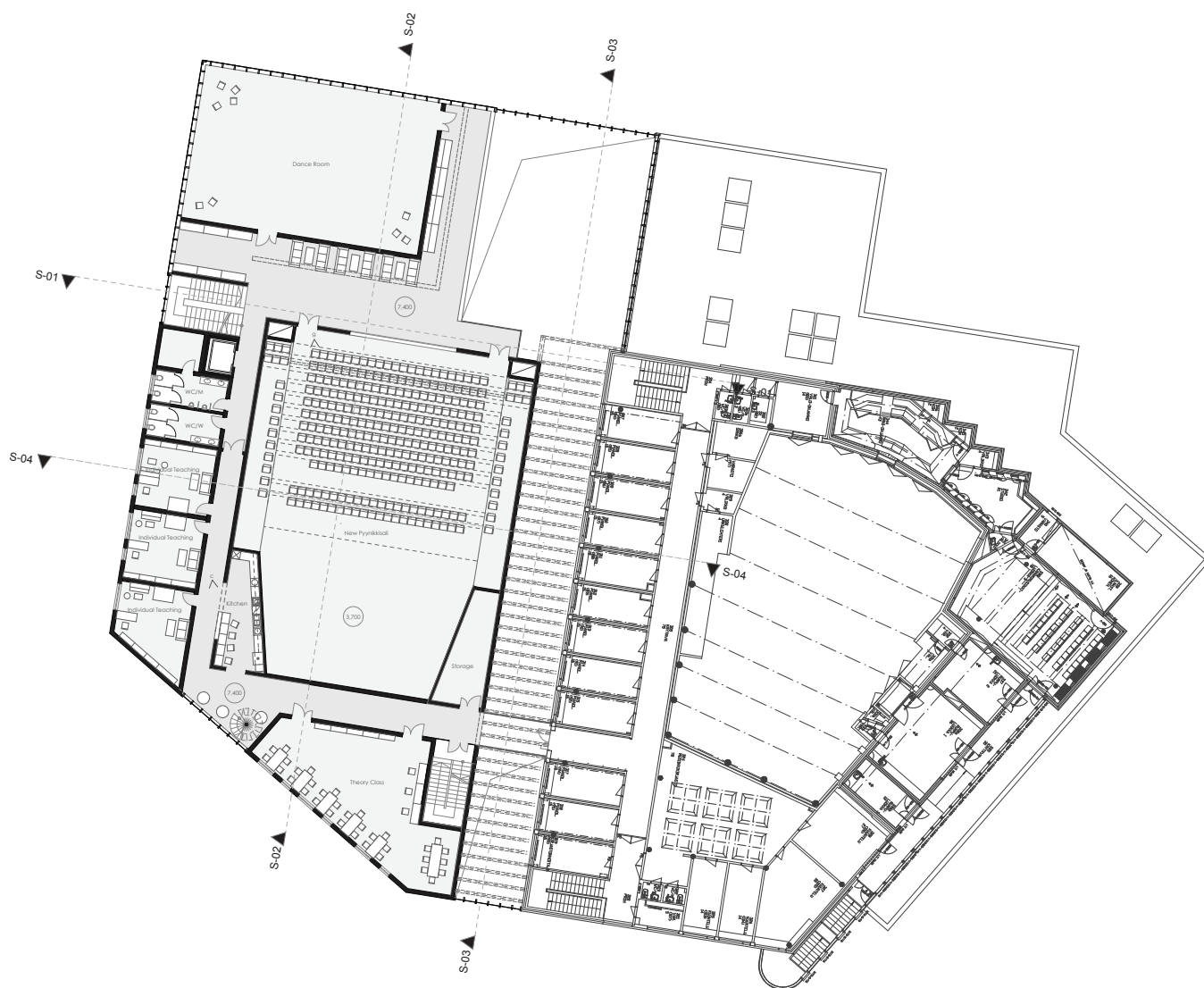
The present conservatory cafeteria facilities are inadequate, so in new plan the cafe space would be enlarged. Lounge rooms will be designed in such a way that they serve both new and old conservatories seamlessly. Layouts would be optimized so that the area spend on these premises is used as effectively as possible.



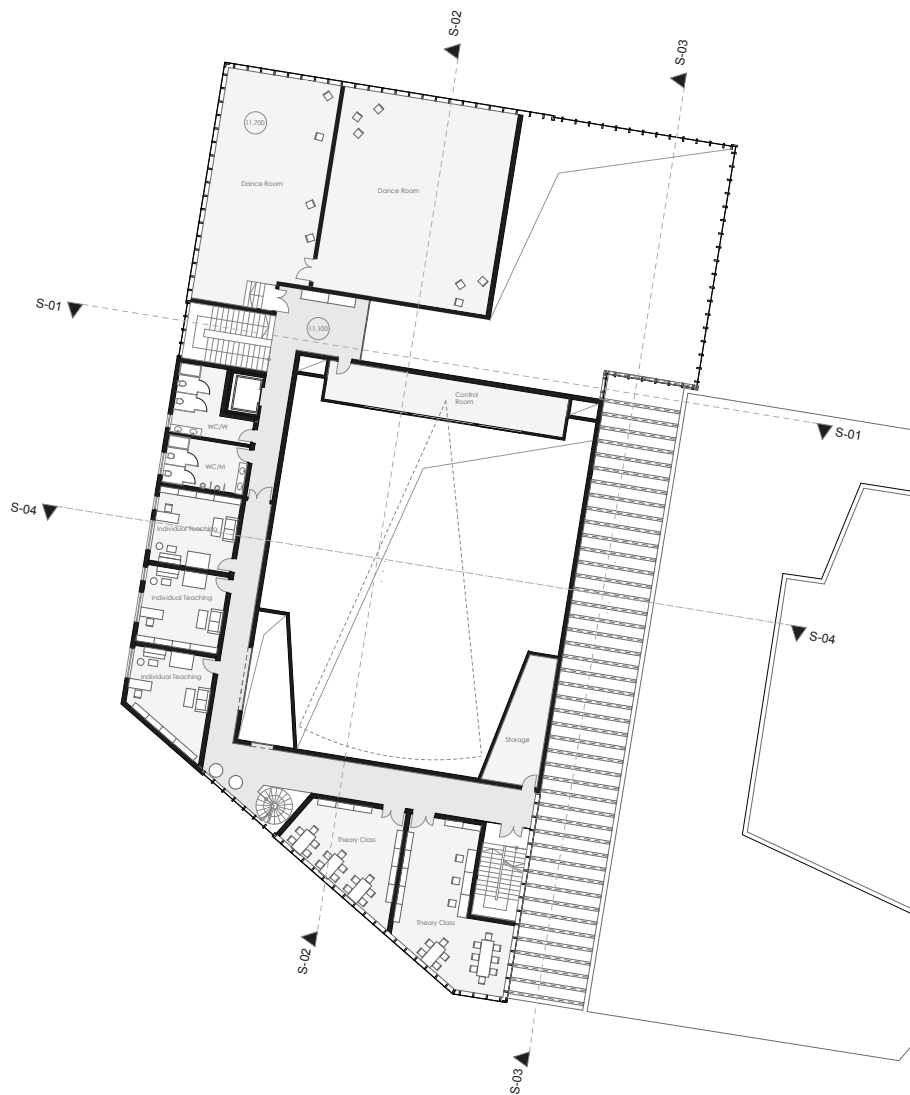
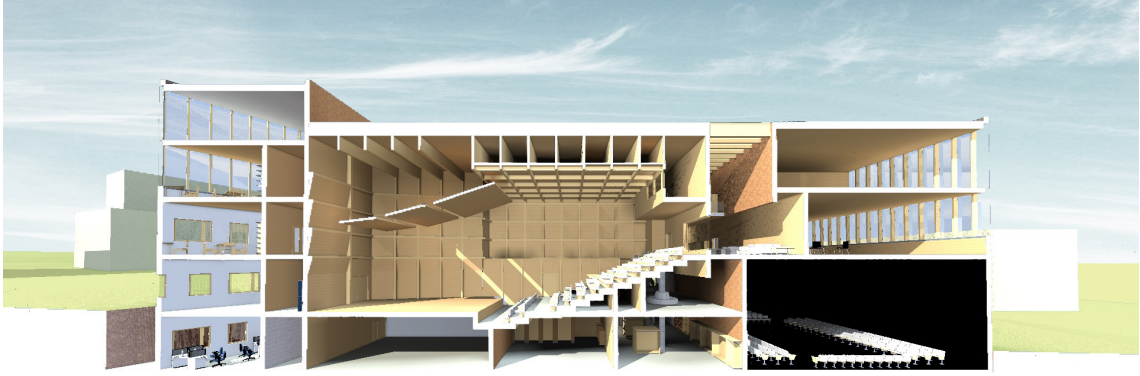
Ground Floor 1/500



First Floor 1/500

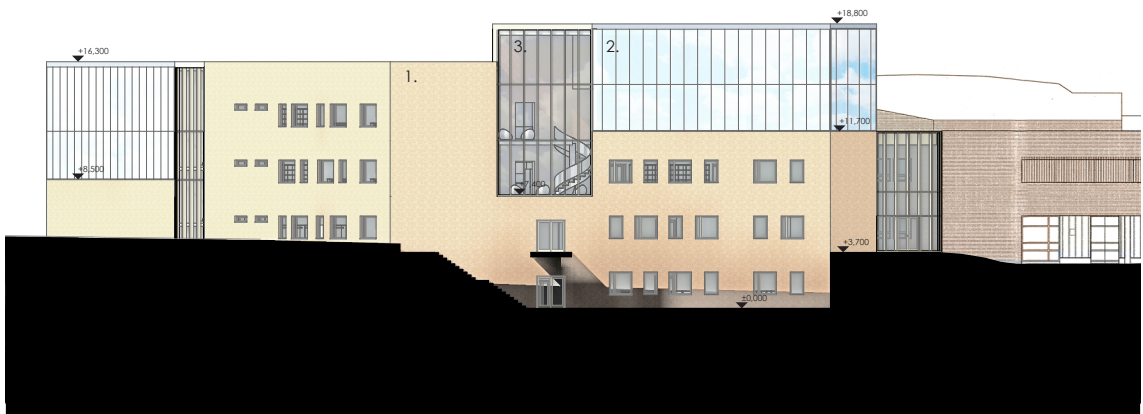


Second Floor 1/500



Third Floor 1/500



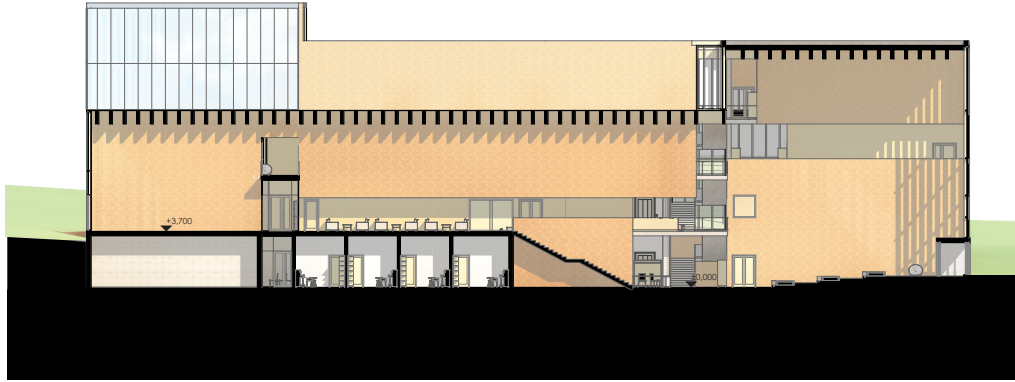


Southwest Facade 1/500

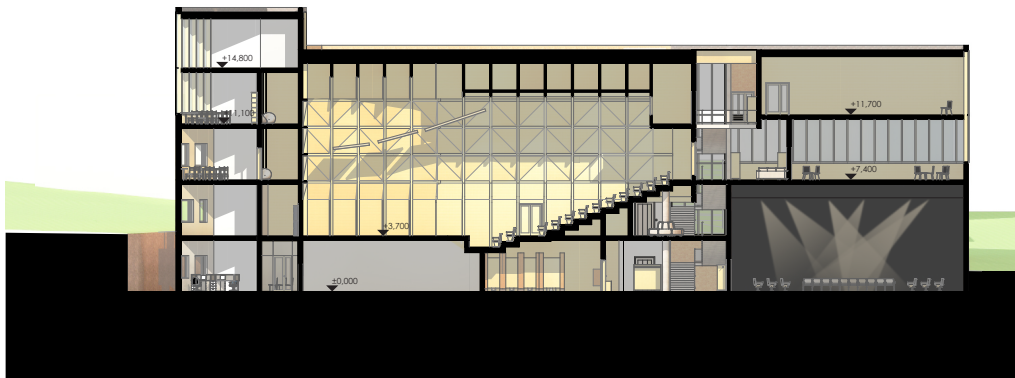


- 1.Red brick
- 2.Sandblasted glass
- 3.Glass
- 4.Wood
- 5.Concrete

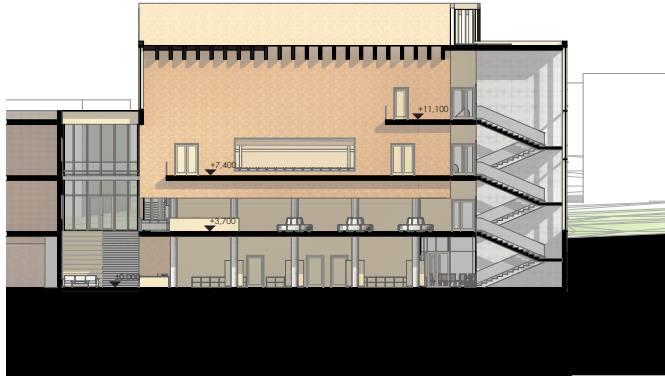
North Facade 1/500



Section 03 1/500



Section 02 1/500



Section 01 1/500



Section 04 1/500